

REMARKS

Claims 1-12 are present in this application. Claims 1, 7, and 11 are independent.

Objection to the Specification

The title of the application has been objected to as not being descriptive. Accordingly, Applicants provide herewith a new title. Applicants request that the objection be reconsidered and withdrawn.

Claim Objection

Claim 1 has been objected to. Applicants have amended claim 1. Accordingly, Applicants request that the objection be reconsidered and withdrawn.

Allowable Subject Matter

Applicants wish to thank the Examiner for indicating that claims 1-6 are allowed, and that claims 8, 9, and 12 contain allowable subject matter.

Claim Rejection – 35 U.S.C. § 102

Claims 7, 10, and 11 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Application Publication 2005/0019679 (Lo). Applicants have amended claims 7 and 11. Applicants request reconsideration of the rejection based on the claims as amended.

Claim 7 is directed to a color filter comprising a substrate, a resin black matrix formed on the substrate, and a colored film covering a portion of the substrate located inside an opening in the resin black matrix and covering at least a portion of the resin black matrix. The resin black matrix has an edge portion located along the opening in the resin black matrix and is covered by the colored film. The edge portion and a portion of the resin black matrix contiguous with the edge portion form a step structure, where the edge portion is thinner than the portion of the resin black matrix contiguous with the edge portion.

As stated in the present specification, the structure recited in claim 7 is without foaming generated when a colored film is bonded, thereby preventing an adverse effect from the foaming from appearing on the display (paragraph 0032). The resulting color filter has superior display quality since it is without the adverse effect from foaming.

In rejecting claims 7 and 11, the Office Action relies on Fig. 3D of Lo. The Office Action does not particularly point out what in Fig. 3D shows an edge portion that is thinner than a portion of the black matrix that is contiguous with the edge portion. For the sake of argument, Applicants assume that Lo's tapered edge portion of the black matrix in a region beneath the partial transparent region 208b is being relied on for teaching the claimed edge portion.

Lo addresses a problem of an excessive step height h_2 that occurs at the edge of the black matrix when a black resin is used (Lo's Fig. 2, and para. 0009). In order to address the problem and to avoid an extra polishing step, Lo teaches use of a photomask that includes a partial transparent region 208b located between a transparent region 208a and a non-transparent region 208c and aligned to the edge of the black matrix (para. 0012; Fig. 3C). In a step of patterning the

color photoresist layer, the color photoresist region that is aligned to the partial transparent region 208b has a removal rate between the removal rates of the color photoresist layer which are aligned to the transparent region 208a and the non-transparent region 208c. Thus, the resulting structure has substantially no step height h_2 for the color photoresist layer 204a. (para. 0030; Fig. 3D).

Prior to the patterning of the photoresist layer 204, the black matrix 202 of Lo had been formed by patterning a non-transparent material using a traditional photolithographic process (para. 0023). A positive or negative color photoresist layer 204 had been formed on the substrate for covering the black matrix 202 (para. 0024).

Thus, it can be seen that Lo discloses a different method for forming the color layer, and its different method results in a different structure. Applicants have amended claim 7 in order to clarify the claimed edge portion that is thinner than the portion of the resin black matrix contiguous with the edge portion. In particular, claim 7 recites that the difference in thickness forms a step structure for the resin black matrix.

Applicants submit that Lo does not anticipate each and every feature of claim 7.

With respect to claim 11, the Office Action states that, "it is inherent that the colored film would first contact the black matrix at the thinner edge." Applicants disagree. Lo only teaches that a color photoresist layer 204 is formed on the substrate for covering the black matrix. Applicants submit that Lo does not teach or suggest that the photoresist would be applied such that it first contacts the matrix at the thinner edge, as required in claim 11.

In order to clarify this distinction, claim 11 has been amended to recite a limitation comparable to claim 1 of bonding the colored film in such a manner that the colored film first contacts the matrix “on an upstream side” at the thinner edge. Applicants submit that Lo does not teach or suggest at least this claimed feature.

Accordingly, Applicants request that the rejection be reconsidered and withdrawn.

Conclusion

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert W. Downs (Reg. No. 48,222) at the telephone number of (703) 205-8000, to conduct an interview in an effort to expedite prosecution in connection with the present application.

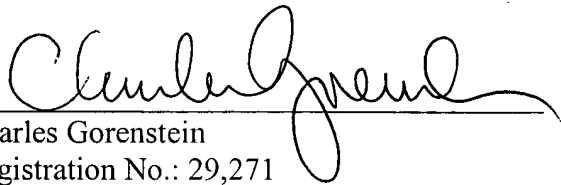
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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: December 21, 2005

Respectfully submitted,

By 

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